

IN THE CLAIMS

Please **cancel** claims 39-41, 52, 54, 57-79, 80-81, and 83-84 without prejudice.

Please **amend** claims 42-49, 53, 55-56, 82, and 85-86 with the following rewritten

claims:

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42. (AMENDED) The nucleic acid of claim 43, wherein said nucleotide sequence is nucleotides 13-1314 of SEQ ID NO:3.

43. (AMENDED) A nucleic acid comprising a nucleotide sequence encoding a polypeptide having the amino acid sequence of SEQ ID NO:4, said amino acid sequence comprising at least one immunogenic epitope.

44. (AMENDED) The nucleic acid of claim 43, wherein said nucleic acid is an isolated nucleic acid.

45. (AMENDED) The nucleic acid of claim 43 further comprising an expression control sequence operably linked to said nucleotide sequence.

46. (AMENDED) The nucleic acid of claim 45, wherein said expression control sequence comprises a promoter.

47. (AMENDED) The nucleic acid of claim 45, wherein said expression control sequence comprises an enhancer.

48. (AMENDED) A method of preparing a polypeptide comprising a carboxy-terminal portion of the heavy chain of botulinum neurotoxin serotype A comprising at least one immunogenic epitope, comprising:

transfecting a cell with a nucleic acid having a nucleotide sequence encoding a polypeptide having the amino acid sequence of SEQ ID NO:4, said amino acid sequence comprising at least one immunogenic epitope; and

culturing the transfected cell under conditions wherein the nucleic acid is expressed,

wherein the cell is selected from the group consisting of a gram negative bacteria, a yeast, and a mammalian cell.

49. (AMENDED) The method of claim 48, further comprising recovering from said transfected cell at least one insoluble polypeptide having the amino acid sequence of SEQ ID NO:4, said amino acid sequence comprising at least one immunogenic epitope.

53. (AMENDED) A method of preparing an immunogenic composition comprising a polypeptide having the amino acid sequence of SEQ ID NO:4, said amino acid sequence comprising at least one immunogenic epitope, comprising:

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culturing a cell transfected with an expression vector comprising a nucleic acid having a nucleotide sequence encoding a polypeptide having the amino acid sequence of SEQ ID NO:4, said amino acid sequence comprising at least one immunogenic epitope under conditions wherein the nucleic acid is expressed; and

recovering from said transfected cell at least one insoluble polypeptide comprising the amino acid sequence of SEQ ID NO:4, said amino acid sequence comprising at least one immunogenic epitope,

wherein the cell is selected from the group consisting of a gram negative bacteria, a yeast, and a mammalian cell.

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55. (AMENDED) The nucleic acid of claim 43, wherein the AT content is less than about 70% of the total base composition.

E5  
56. (AMENDED) The nucleic acid of claim 55, wherein the  
AT content is less than about 60% of the total base  
composition.

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E6  
82. (TWICE AMENDED) A recombinant host cell comprising  
the nucleic acid of claim 45.

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E7  
85. (AMENDED) The recombinant host cell of claim 82,  
wherein said polypeptide is at least 0.75% (w/w) of  
the total cellular protein.

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86. (AMENDED) The recombinant host cell of claim 85,  
wherein said polypeptide is at least 20% (w/w) of the  
total cellular protein.

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